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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,860	03/17/2004	Hitoshi Kino	26B-026	1979

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POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER	
MCMAHON, MARGUERITE J	

ART UNIT	PAPER NUMBER
3747	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,860	KINO ET AL.	
	Examiner	Art Unit	
	Marguerite J. McMahon	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 6, and 7 are objected to because of the following informalities: In lines 5-7 of claims 1 and 7 "an air cleaner hose disposed between the downstream side of the air cleaner and the upstream side of a combustion chamber of an engine and for supplying the filtered intake air to a combustion chamber of an engine to thereby define an intake air passageway" is confusing because the parameters of the intake air passageway are still not clearly defined in the claim language; the newly added language referring to "a passageway section ranging from the inlet to the upstream end of the combustion chamber in which the intake air flows" only adds to the confusion, as now we have both an intake air passageway and a passageway section, which are both unclear. In addition, the newly added limitation of "inside the air cleaner..." also muddies the waters further since the subject of "inside the air cleaner" is not clear, and the language then goes on to recite that the lower resonance mode corresponding to the whole passageway length (which lacks antecedent basis) of the (unclear) intake air passageway. In line 10 of claim 1 "'the whole passageway length" of the intake air passageway" is unclear as a result (similarly in claim 7 "the whole length of the intake air passageway" is also unclear). Claim 6 is also unclear because "the lower resonance mode corresponding to the whole passageway length of the intake air passageway" is unclear for the reasons given above. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (4,538,556) in view of Kino et al (6,517,595). Takeda shows an air intake apparatus comprising: an air intake duct 10 provided with an inlet through which intake air is introduced; an air cleaner 1 disposed on the downstream side of the air intake duct and for filtering the intake air; an air cleaner hose 2 disposed between the downstream side of the air cleaner and the upstream side of a combustion chamber of an engine and for supplying the filtered intake air to the combustion chamber to thereby define an intake air passageway ranging from the inlet to the upstream end of the combustion chamber in which the intake air flows; a wall member 5 disposed, with valve 7, to block a communicating path disposed in a wall of the intake air passageway wherein the wall is configured to surround an antinode of a lower resonance mode inside the air cleaner, the lower resonance mode corresponding to the whole passageway length of the intake air passageway; and a valve 7 disposed in the wall for opening the communicating path to allow the inside of the intake air passageway to communicate with the outside thereof at least when the lower resonance mode occurs. Takeda shows everything except he does not employ an air permeable member or discuss the placement of the antinodes. Kino et al teach that it is old in the art to

employ an air permeable member 14 in the wall member 5. It would have been obvious to one having ordinary skill in the art to modify Takeda by employing an air permeable member, in order to reduce noise levels. In addition, the placement of the air-permeable member on the inner side of the path or the outer side of the path, with respect to the valve, would have been an obvious matter of design choice, as evidenced by claims 8 and 9 claiming it both ways. Furthermore, the discussion of the antinodes is vague enough that it reads on the reference.

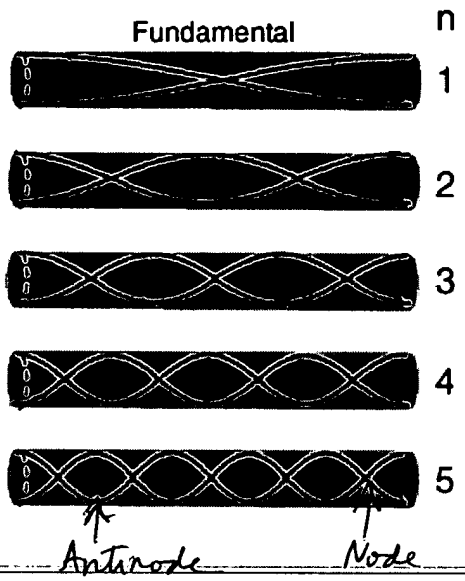
Response to Arguments

Applicant's arguments filed 9/27/05 have been fully considered but they are not persuasive. Applicant argues that Takeda fails to teach an air permeable member disposed in a wall of the intake air passageway. Since Takeda has not been relied upon to teach this feature, this argument is irrelevant.

Applicant further argues that Takeda fails to teach or suggest that the wall is configured to surround an antinode of a lower resonance mode inside the air cleaner, and that Takeda has no discussion of resonance modes and there fore does not teach a configuration with respect to an antinode. While it is true that Takeda does not discuss antinodes or lower resonance modes, this does not mean that they do not exist. Resonance naturally occurs in the air intake and inherently varies as the engine runs. Pressure waves of the gas columns inside the intake ducts, waves induced by the cyclic openings and closing of the valves, is the cause of resonance. When there is resonance, there are naturally nodes and antinodes occurring, as shown below.

Harmonics of Open Air Column

An open cylindrical air column can produce all harmonics of the fundamental. The positions of the nodes and antinodes are reversed compared to those of a vibrating string, but both systems can produce all harmonics. The sinusoidal patterns indicate the displacement nodes and antinodes for the harmonics. A pressure node corresponds to a displacement antinode, and the harmonic patterns can also be visualized in terms of air pressure or density patterns.



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Wave concepts

Resonance concepts

HyperPhysics***** Sound

It is inherent that these nodes and antinodes occur throughout the length of the air passageway, since the passageway does not produce a musical tone, which would have only a few nodes and antinodes. Instead, it produces a sound which is not particular pleasant because it is not particularly harmonious and therefore has nodes and antinodes occurring throughout its length. Thus, the claim language indicating that the "wall is configures to surround an antinode of a lower resonance mode" is merely describing an inherent phenomena of any engine air intake.

Applicant further argues that Takeda fails to teach or suggest a valve in the wall. As mentioned in the above rejection, Takeda employs valve 7 disposed in the wall for opening the communicating path to allow the inside of the intake air passageway to

communicate with the outside thereof at least when the lower resonance mode occurs. Applicant argues that Takeda is controlled by an actuator, but there is nothing in the claim language regarding how the valve is controlled.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art to modify Takeda, in view of the teachings of Kino, by employing an air permeable member, in order to reduce noise levels.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marguerite J. McMahon whose telephone number is 703-308-1956. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuen Henry can be reached on 703-308-1946. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARGUERITE MCMAHON
PRIMARY EXAMINER